REMARKS

This application was previously the subject of a restriction requirement. Claims 1-16 were elected for response in this application, claims 17-44 were withdrawn, and claims 45-53 were added.

Claims 4-8 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections under 35 USC 103 .

Claims 1-3 and 9-14 are rejected under 35 USC 103(a) as being unpatentable over Seita (USP 5,808,352) in view of Smesny et al. (USP 5,444,637). Claim 1 recites, "an electronics module that communicates with the first portion, the electronics module attached to the substrate carrier." No such electronics module appears to be shown by the cited references. "Robot 3" of Seita was cited as showing this feature. However, element 3 does not appear to be a robot or an electronics module. "Reference numeral 3 designates a robot flange." Column 5, line 8 (emphasis added). Also, robot flange 3 does not appear to be in communication with the first portion. Robot flange 3 appears to be a feature provided for a robot to handle wafer carrier 100. "The OHT section 20 holds the robot flange 3 provided on the carrier shell 1," column 7, lines 28-29. Thus, it is not seen how robot flange 3 could be considered to be an electronics module. Because this claim feature has not been shown in the cited references, no *prima facie* case of obviousness is made with respect to claim 1.

In addition, no adequate motivation is provided to combine the references. The Office Action stated it would have been obvious "to modify the apparatus of Seita by adding a plurality of sensors on the substrate as taught by Smesny et al. in order to detect processing condition by read, store and retrieve conditions registered within each region of the substrate," Office Action, page 3, lines 16-19. However, Seita appears to teach away from such a combination. Seita discloses a problem with prior designs, "Adhesion of such extraneous matter potentially induces pattern failures or the like, and hence countermeasures against the extraneous matter must be taken in some way," column 2, lines 15-17. Seita attempts to prevent adhesion of extraneous matter to wafers to provide

"a reduction in faulty products, such as imperfect products, and achievement of high production yield," column 3, lines 44-45. Adding a plurality of sensors to a substrate would appear contrary to this purpose. In particular, if sensors are added to a substrate, yield would appear to be lowered accordingly. MPEP 2143.01 states, "The proposed modification cannot render the prior art unsatisfactory for its intended use." Because the intended use of the apparatus of Seita is prevention of adhesion of extraneous matter to substrates, and the proposed modification would involve deliberately adhering (or otherwise attaching) extraneous matter (sensors) to substrates, this modification would appear to make the apparatus of Seita unsatisfactory for its intended purpose. Therefore, claim 1 is submitted to be allowable over the cited references.

Claims 2-10 depend from claim 1 and are submitted to be allowable at least for depending from an allowable base claim. In addition, additional limitations are recited that are not shown in the cited references. For example, claim 9 (amended to remove the term "greycode") recites "a pattern on at least one surface of the substrate; and an optical reading apparatus attached to the substrate carrier that reads the pattern on the substrate to determine the orientation of the substrate." No such pattern appears to be shown in the cited reference (Figure 5 of Seita). Furthermore, substrate processing system 21 does not appear to be an optical reading apparatus and does not appear to be attached to the substrate carrier.

Claim 11 recites, "an electronics module attached to the substrate carrier that communicates with the process condition measuring device." No such electronics module appears to be shown by the cited references. In particular, as discussed above, the cited element of Seita (robot flange 3) does not appear to be an electronics module or to be in communication with a process condition measuring device. Because this claim element has not been shown, no *prima facie* case of obviousness is made with respect to claim 11.

In addition, no adequate motivation is provided to combine the references. The Office Action stated it would have been obvious "to modify the apparatus of Seita by adding a plurality of sensors on the substrate as taught by Smesny et al. in order to detect processing condition by read, store and retrieve conditions registered within each region of the substrate," Office Action, page 5, lines 7-9. However, as discussed above, Seita

teaches away from adding anything to substrates. Adding sensors to the substrates of Seita would appear to make them unsatisfactory for their intended purpose of making products with reduced faults.

Claims 12-16 depend from claim 11 and are submitted to be allowable at least for depending from an allowable base claim. Claims 12-16 recite additional limitations not shown by the cited references. Claim 16 is not addressed in the Office Action. Because no rejection has been made with respect to claim 16, claim 16 is presumed to be objected to, but considered allowable if rewritten in independent form.

Claim Rejections under 35 USC 102

Claims 45-53 are rejected under 35 USC 102(b) as being anticipated by Smesny et al. (USP 5,444,637). Claim 45 recites, "a power supply unit attached to the housing and a communication unit attached to the housing, the power supply unit providing power to the first part and the communication unit providing communication between the first part and the second part." These limitations do not appear to be shown by Smesny. The Office Action referred to column 12, lines 14-16 as disclosing a power supply. However, the cited portion appears to refer to an RF power supply unit used to generate a plasma. "Ions can be formed within the gas plasma and between electrodes." Column 12, lines 22-23. It is not seen how this provides power to the first part (identified as wafer 10). The Office Action cited linear encoders 98 as a communication unit. However, linear encoders do not appear to be for communication. "Linear encoders 98 determine the relative position of upper electrode 92 based upon a known position of lower electrode 96." Column 12, lines 41-43. In particular, linear encoders 98 do not appear to provide communication between the first part and the second part. Because these limitations have not been shown in the cited references, claim 45 is submitted to be allowable.

Claims 46-50 depend from claim 45 and are submitted to be allowable at least for depending from an allowable base claim. In addition, claims 46-50 recite additional limitations not shown in the cited references. For example, claim 47 recites, "an induction coil that inductively transmits power to the first part." The Office Action stated that this was inherent in the power supply of column 12, lines 14-16. However, it is

submitted that such inductive transmission of power to a first part (here, wafer 10) is not inherent in an RF power supply.

Claim 48 recites, "the communication unit uses the induction coil to provide communication between the first part and the second part." No such use of an induction coil by linear encoders 98 appears to be disclosed.

Claim 49 recites, "the communication unit uses light to communicate with the first part." The Office Action cited photodiode sensor 106 as showing this feature. However, photodiode sensor 106 does not appear to be part of linear encoders 98 (cited as communication unit). Instead, photodiode sensor 106 appears to be attached to a wafer, "photodiode sensor 106 formed upon wafer 10," column 12, line 65.

Claim 50 recites, "the housing is a Standard Mechanical Interface (SMIF) box or a Front Opening Unified Pod (FOUP)." Chamber 90 of Smesny (cited as the housing) does not appear to be either a SMIF box or a FOUP.

Claim 51 recites, "the process condition measuring device further including a power supply and a first induction coil." Wafer 10 (cited as process condition measuring device) does not appear to have such an induction coil. In addition, claim 51 recites, "a handling system including a second induction coil" and "the first and second induction coils being inductively coupled when the process condition measuring device is at the location, the inductive coupling transferring both electrical power and data." Chamber 90 appears to have no such second induction coil. Electrode 94 (cited as second induction coil) does not appear to be a coil. No such inductive coupling transferring both electrical power and data appears to be disclosed. Therefore, claim 51 is submitted to be allowable.

Claims 52 and 53 are submitted to be allowable at least for depending from an allowable base claim. In addition, claims 52 and 53 recite limitations not shown in the cited references. Claim 52 recites, "power is transferred from the handling system to the process condition measuring device through the inductive coupling and data is transferred from the process condition measuring device to the handling system through the inductive coupling." No such transfer of power and data appears to be shown by Smesny. Claim 53 additionally recites, "data is also transferred from the handling system to the process condition measuring device through the inductive coupling." No such

transfer of data from chamber 90 to wafer 10 by inductive coupling appears to be shown by Smesny.

CONCLUSION

All claims of the present application are submitted to be in condition for allowance and an indication of their allowance is requested. However, if the Examiner has any further issues that should be discussed, a telephone call to the undersigned at (415) 318-1167 would be appreciated.

Respectfully submitted,

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Date

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